

Introduction

Increased atmospheric concentrations of greenhouse gases (GHGs) such as carbon dioxide, methane and nitrous oxide are thought by many scientists to lead to climate change. Many developed nations have ratified the Kyoto Protocol which is an international agreement to reduce emissions of GHGs. However, the United States (U.S.) has chosen not to ratify the Protocol or develop federal standards for reducing GHG emissions. Interestingly, many individual States and local governments are examining their GHG emissions even in the absence of a federal mandate.

In 2005 a coalition of U.S. mayors, led by Seattle mayor Greg Nickels, developed and signed the Mayors' Climate Protection Agreement (MCPA) as a grassroots effort to lower GHG emissions. As of April 2007, 453 U.S. mayors have signed onto the MCPA. The agreement encourages member mayors and their respective cities to reduce their GHG emissions to 7% below their 1990 levels (similar to the goal set by the Kyoto Protocol). On August 16, 2006 Boise Mayor David Bieter signed onto the MCPA.

Problem Statement

In their commitment to reduce GHG emissions, city governments face many challenges, for example:

- establishing emissions present in 1990;
 - identifying practices and technologies that can reduce emissions;
 - allocating resources to emission reductions;
- among many others.

This poster will examine the commitment by the City of Boise to the MCPA, some of the challenges faced by the City to date and propose economic tools that can help the decision making processes.

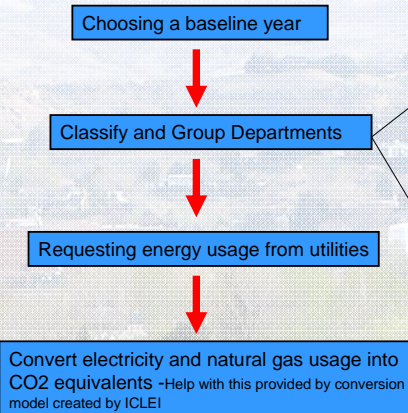
Methods: The Boise Experience

In December of 2006 Boise City officials started to compile quantifiable inventory data for Boise GHG emissions. Boise is planning on two stages for the MCPA:

- The first stage will focus on creating an inventory of emissions for City of Boise facilities and vehicles and develop strategies to reduce these emissions;
- The second stage will address GHG emissions for the entire Boise community.

Boise Phase 1

At present Boise is working on creating an emissions inventory. (Phase 1 in Figure 1). City of Boise officials anticipate that the stage 1 inventory will be completed by mid-summer of 2007. Figure 2 details the step by step process and challenges of creating the Boise emissions inventory.



Department	Number of Facilities
Airport	18
Fire Dept.	15
Police Dept.	12
Library	3
Planning & Development	15
Public Works	27
Parks & Rec.	101
Admin. Services	7

Figure 2. Process of Creating an Emissions Inventory for Boise

Boise Phase 2

Upon completion of Phase 1, Boise will then set reduction targets. The general MCPA calls for a 7% reduction in emissions from 1990 levels. Because of difficulties in collecting 1990 data, Boise has chosen 2000 as the baseline year. In addition, Boise is considering other reduction targets, to suit the MCPA to Boise's particular needs and circumstances.

Boise Phase 3

The City of Boise will consider all reduction options as soon as they have quantifiable data. A six member, non-city employee, advisory committee has been created to include public opinion, and to provide fresh and innovative insights into the planning process. The group, named the Climate Protection Program Advisory Committee, meets twice a month and is open to the public. This committee has been meeting since January 2007. Many possible reduction strategies have been discussed, including but not limited to, changing building codes and standards, providing economic incentives, and improving fuel standards for City of Boise fleet vehicles. Figure 1 and the discussion on Cost-Effectiveness Analysis outlines a theoretical economic framework under which Boise may consider Phase 3 options.

Boise Phase 4

In the fourth phase of the MCPA, reduction strategies selected in Phase 3 will be implemented. Although seemingly straightforward, the choices made in Phase 3, will determine drastically different implementation costs and procedures. As Boise is only part-way through phase one it is much too early to discuss the particulars of Phase 4.

Boise Phase 5

The final phase of the MCPA will be for Boise to monitor and oversee the reductions strategies and action plans created and implemented in Phases 3 and 4. This phase is important, in order for Boise to accomplish the sought after targeted emissions reductions.

MCPA Implementation Framework

Figure 1, shows the general steps each signatory to the MCPA will undertake to reduce their GHG emissions. Each phase outlined is a significant undertaking and in some cases could take several months to a number of years.

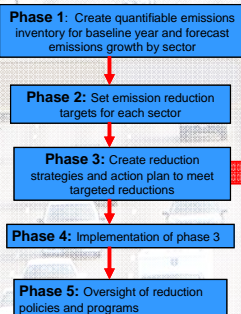
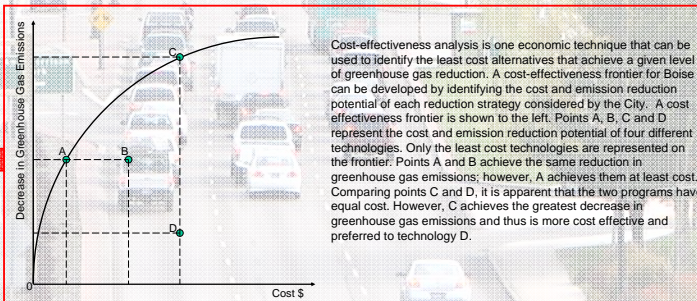


Figure 1. MCPA Implementation Process



Summary and Discussion

This poster highlights the challenges faced by the City of Boise in implementing the MCPA, and proposes an economic tool, cost-effectiveness analysis, that the city can use to aid its decision making process. The City of Boise is in the very first stages of its quest to lower GHG emissions. Within the next few months, Boise will have completed a quantifiable inventory of emissions. Thereafter Boise policy makers will be faced with the challenge of choosing efficient emissions reductions strategies. Decision makers will need to thread the needle between politically expedient and economically sound policy decisions.

Acknowledgements

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